

Table 4-2
2008 Sediment Data Summary - Detected Analytes
NRG Middletown

CONSTITUENT Depth below river bottom	Results										Summary Statistics					CT ResDEC	Sediment Benchmarks	
	NRG-A 0-9 ft	NRG-B 0-6 ft	NRG-C 0-6 ft	NRG-D 0-2 ft	NRG-E 0-2 ft	NRG-F 0-2 ft	NRG-G 0-1 ft	NRG-H 0-5 ft	NRG-I 0-6 ft	# Times Detected	# Times Analyzed	Minimum Conc.	Maximum Conc.	Max Conc Location	TEC (or equivalent)	PEC (or equivalent)		
	0-9 ft	0-6 ft	0-6 ft	0-2 ft	0-2 ft	0-2 ft	0-1 ft	0-5 ft	0-6 ft									
Volatile Organic Compounds (ug/kg)																		
Dichloromethane	<4.5	<3.4	<3.4	20	<4.1	<3.3	<3.7	<4.4	27	2	9	20	27	I	82000	370 (3)	NE	
Semi-Volatile Organic Compounds (ug/kg)																		
Benzo(a)anthracene	470	<350	<360	<360	<370	<380	<350	<450	<360	1	9	470	470	A	1000	108 (1a)	1050 (1b)	
Benzo(a)pyrene	520	<350	<360	<360	<370	<380	<350	<450	<360	1	9	520	520	A	1000	150 (1a)	1450 (1b)	
Benzo(b)fluoranthene	500	<350	<360	<360	<370	<380	<350	<450	<360	1	9	500	500	A	1000	240 (2a)	13400 (2b)	
Chrysene	480	<350	<360	<360	<370	<380	<350	<450	<360	1	9	480	480	A	84000	166 (1a)	1290 (1b)	
Fluoranthene	760	<350	<360	<360	<370	<380	<350	<450	<360	1	9	760	760	A	1000000	423 (1a)	2230 (1b)	
Pyrene	940	<350	<360	<360	<370	<380	<350	<450	<360	1	9	940	940	A	1000000	195 (1a)	1520 (1b)	
Metals (mg/kg)																		
Arsenic	<0.07	1	1.3	1.8	1.4	1.2	0.9	<0.09	1	7	9	0.9	1.8	D	10	9.79 (1a)	33 (1b)	
Barium	19	18.1	14.7	18	17.3	15.5	18.2	27.2	14.3	9	9	14.3	27.2	H	4700	NE	NE	
Chromium	9.98	10.4	9.72	9.57	9.72	8.53	9.44	14.4	8.1	9	9	8.1	14.4	H	100	43.4 (1a)	111 (1b)	
Copper	5.67	4.92	3.81	4.08	4.76	3.56	4.49	10.4	3.68	9	9	3.56	10.4	H	2500	31.6 (1a)	149 (1b)	
Lead	6.83	7.19	6.37	6.35	6.5	6.03	6.08	2.8	5.2	9	9	2.8	7.19	B	500	35.8 (1a)	128 (1b)	
Nickel	12.6	13.6	11.7	13.6	13.1	12.4	13.2	13.4	11.5	9	9	11.5	13.6	B,D	1400	22.7 (1a)	48.6 (1b)	
Vanadium	9.62	9.21	8.19	8.58	8.5	8.88	8.87	18.3	8.12	9	9	8.12	18.3	H	470	NE	NE	
Zinc	48.5	197	41.8	50.9	47.5	44.4	48.7	31.6	38.1	9	9	31.6	197	B	20000	121 (1a)	459 (1b)	
Total Cyanide	<0.56	<0.54	<0.55	<0.54	<0.55	<0.57	<0.54	1	<0.56	1	9	1	1	H	NE	NE	NE	
Total Organic Carbon (mg/kg)	<100	<100	<100	<100	<100	<100	<100	<100	<100									

Notes:

NE = Not established

ug/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

< = Result considered non-detect, reported as less than the indicated reporting limit.

Bold = Result reported exceeds TEC

Shading = Result reported exceeds PEC

CT Res DEC = Connecticut Residential Direct Exposure Criteria

Sediment Benchmark Key:

(1a) Consensus-Based Sediment Quality Guidelines; Threshold Effect Concentration (TEC) from MacDonald et al, 2000.

(1b) Consensus-Based Sediment Quality Guidelines; Probable Effect Concentration (PEC) from MacDonald et al, 2000.

(2a) = Ontario Ministry of the Environment (MOE), Lowest Effect Level (benzo(k)fluoranthene surrogate value), from Jones et al, 1997.

(2b) = Ontario MOE, Severe Effect Level (benzo(k)fluoranthene surrogate value), from Jones et al, 1997.

(3) = Secondary Chronic Value from Jones et al, 1997. Not appropriate for use with sediments containing less than 0.2% total organic carbon.